

REMARKS

Claims 1-10 are now pending in the application. Claims 1, 3, 8, and 10 are amended in a non-limiting fashion merely in response to informal claim objections and rejections under 35 U.S.C. § 112, second paragraph. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 112

Claim 10 is objected for certain informalities. In particular, the Examiner's remarks indicate that the preamble of claim 10 should recite a "the system" instead of "an information system". Appropriate correction has been made. Accordingly, Applicants' respectfully request that Examiner reconsider and withdraw the objection to claim 10.

REJECTION UNDER 35 U.S.C. § 112

Claims 1 and 8 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

The Examiner's remarks indicate that certain phrases in claims 1 and 8 lack antecedent basis. In addition, the Examiner's remarks indicate the same for claim 3, although claim 3 has not been rejected on this basis. Yet, Applicants' have made appropriate correction to each of claims 1, 3, and 8. Accordingly, Applicants' respectfully request the Examiner reconsider and withdraw the rejections of claims 1 and 8 under 35 U.S.C. § 112, second paragraph, and also continue to withhold the rejection for claim 3.

REJECTION UNDER 35 U.S.C. § 102

Claims 1, 3, 7 and 8 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over Jamalabad et al (U.S. Pat. No. 6,574,633). This rejection is respectfully traversed.

Jamalabad et al. is generally directed toward a method for dynamically grouping limited range physical entities in a topological space. In particular, the Examiner relies on Jamalabad to teach electing coordinators from spatially defined sets of mobile entities, using the coordinators to compute costs of selectively subdividing and merging the sets, using the costs to generate a new partitioning scheme, and communicating that scheme to the mobile entities. However, every example application in Jamalabad et al. indicates that the entities that need to interact with the central processor are not mobile, that these entities are merely being selected to perform tasks that are not related to the dynamic grouping of the entities, and that there is no need to communicate a new partitioning scheme to any of the entities.

For example, Jamalabad et al. teaches dynamically grouping entities as in a cell phone application or military sensor application, where the entities that need to be selected are not mobile, and there is no need to communicate a partitioning scheme to any of the entities. In the cell phone application, a central processor needs to poll base stations to find a particular cell phone, and the dynamic grouping is employed solely by the central processor to limit the search of the base stations for subsequent selection in performing an application specific task. Accordingly, coordinator base stations are not selected to participate in forming the dynamic grouping, and there is no need for the mobile entities (cell phones) or even the base stations to know the dynamic grouping.

Thus, Jamalabad et al. does not teach selection of coordinators or that the partitioning entity communicates the new partitioning scheme to the mobile entities.

Applicant's claimed invention is generally directed toward grouping mobile entities. In particular, Applicants' claimed invention is directed toward using a partitioning server to elect coordinators from spatially defined sets of mobile entities, using the coordinators to compute costs of selectively subdividing and merging the sets, using the costs to generate a new partition scheme, and communicating that scheme to the mobile entities. For example, independent claim 1 recites, "for each cell, electing a coordinator from the set of mobile entities occupying that cell; said coordinators cooperatively computing the costs associated with selectively subdividing and merging said cells and communicating said costs to said partitioning entity; and said partitioning entity using said costs to generate a new partition scheme and communicating said new partition scheme to said mobile entities." It should be noted that each coordinator that is elected is a mobile device, that the coordinators participate in the grouping of the mobile entities by computing costs, and that the new partitioning scheme is communicated to the mobile entities. Thus, Jamalabad et al. does not teach all of the elements of independent claim 1. Independent claim 8 recites similar subject matter.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of independent claims 1 and 8 under 35. U.S.C. § 102(e), along with rejection on these grounds of all claims dependent therefrom.

REJECTION UNDER 35 U.S.C. § 103

Claims 2, 4-6 and 9-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jamalabad et al. (U.S. Pat. No. 6,574,633) in view of Weisshaar et al. (U.S. Pat. No. 6,757,262). This rejection is respectfully traversed.

For discussion of Jamalabad et al. Applicants respectfully refer the Examiner to remarks detailed above with respect to rejection under 35 U.S.C § 102(e).

Weisshaar et al. is generally directed toward a service framework supporting remote service discovery and connection. In particular, the Examiner relies on Weisshaar et al. to teach multicasting at column 17, line 51. However, Weisshaar et al. does not teach, suggest, or motivate electing coordinators from spatially defined sets of mobile entities, using the coordinators to compute costs of selectively subdividing and merging the sets, using the costs to generate a new partitioning scheme, and communicating that scheme to the mobile entities.

Applicant's claimed invention is generally directed toward grouping mobile entities. In particular, Applicants' claimed invention is directed toward using a partitioning server to elect coordinators from spatially defined sets of mobile entities, using the coordinators to compute costs of selectively subdividing and merging the sets, using the costs to generate a new partition scheme, and communicating that scheme to the mobile entities. For example, independent claim 1 recites, "for each cell, electing a coordinator from the set of mobile entities occupying that cell; said coordinators cooperatively computing the costs associated with selectively subdividing and merging said cells and communicating said costs to said partitioning entity; and said partitioning entity using said costs to generate a new partition scheme and communicating said new

partition scheme to said mobile entities.” It should be noted that each coordinator that is elected is a mobile device, that the coordinators participate in the grouping of the mobile entities by computing costs, and that the new partitioning scheme is communicated to the mobile entities. Thus, neither Jamalabad et al. nor Weisshaar et al. teach, suggest, or motivate all of the elements of independent claim 1. Independent claim 8 recites similar subject matter.

These differences are significant because communication of the partitioning scheme to the mobile entities using the multicast addresses assigned to the spatially partitioned sets of mobile entities for communication allows the mobile entities to dynamically subscribe to multicast addresses of choice as they change their positions and move across spatially defined cells of the partitioning scheme. Mobile entities in such a scheme are also particularly well-suited to assist in computing costs of selectively dividing and merging cells. These capabilities are not obtained in the references cited by the Examiner, and a simple combination of the teachings of the references would not arrive at Applicants’ claimed invention.

Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejection of claims 2, 4-6 and 9-10 under 35 U.S.C. § 103(a) based on their dependence from allowable base claims.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office

Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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